

PRECEDENTIAL

UNITED STATES COURT OF APPEALS
FOR THE THIRD CIRCUIT

No. 09-2567

NEW JERSEY ENVIRONMENTAL FEDERATION;
SIERRA CLUB; NUCLEAR INFORMATION AND
RESOURCE SERVICE; NEW JERSEY PUBLIC
INTEREST RESEARCH GROUP;
GRANDMOTHERS, MOTHERS AND MORE
FOR ENERGY SAFETY,
Petitioners

v.

UNITED STATES NUCLEAR REGULATORY
COMMISSION; UNITED STATES OF AMERICA,
Respondents

EXELON GENERATION COMPANY, LLC,
Intervenor on behalf of Respondents
per Clerk Order of 7/1/09

On Petition for Review from an
Order of the Nuclear Regulatory Commission
(NRC Nos. CLI-09-07, CLI-08-23 and CLI-08-28)

Argued January 5, 2011
Before: AMBRO and FISHER, *Circuit Judges*, and
SÁNCHEZ,* *District Judge*.

(Filed: May 18, 2011)

Julia A. LeMense
Kevin J. Pflug
William J. Schulte
Eastern Environmental Law Center
744 Broad Street, Suite 1525
Newark, NJ 07102

Richard Webster (Argued)
Public Justice
1825 K Street, N.W., Suite 200
Washington, DC 20006
*Counsel for Petitioners, New Jersey Environmental
Federation; Sierra Club; Nuclear Information
and Resource Service; New Jersey Public Interest
Research Group*

Julia A. LeMense
Eastern Environmental Law Center
744 Broad Street, Suite 1525
Newark, NJ 07102

*The Honorable Juan R. Sánchez, District Judge for
the United States District Court for the Eastern District of
Pennsylvania, sitting by designation.

Richard Webster (Argued)
Public Justice
1825 K Street, N.W., Suite 200
Washington, DC 20006
*Counsel for Petitioner, Grandmothers,
Mothers and More For Energy Safety*

Robert M. Rader, I (Argued)
United States Nuclear Regulatory
Commission O14H13
11555 Rockville Pike
One White Flint North
Rockville, MD 20852-2738
*Counsel for Respondent, United States
Nuclear Regulatory Commission*

John E. Arbab
United States Department of Justice
Environment & Natural Resources Division
P.O. Box 23795
L'Enfant Plaza Station
Washington, DC 20026

Robert M. Rader, I (Argued)
United States Nuclear Regulatory
Commission O14H13
11555 Rockville Pike
One White Flint North
Rockville, MD 20852-2738
Counsel for Respondent, United

States of America

Brad Fagg (Argued)
Morgan, Lewis & Bockius
1111 Pennsylvania Avenue, N.W.
Suite 800 North
Washington, DC 20004
*Counsel for Intervenor on Behalf of
Respondents, Exelon Generation Company, LLC*

OPINION OF THE COURT

FISHER, *Circuit Judge*.

New Jersey Environmental Federation, Nuclear Information and Resource Service, New Jersey Public Interest Research Group, New Jersey Chapter of the Sierra Club, and Grandmothers, Mothers and More for Energy Safety (collectively, “Citizens”)¹ petition for review of three decisions of the Nuclear Regulatory Commission (the “NRC”) granting a license renewal for Oyster Creek Nuclear Generating Station (“Oyster Creek”). Citizens intervened in the license renewal proceedings and offered several contentions challenging the licensee’s plans to detect

¹ Petitioners referred to themselves as “Citizens” before the NRC and in their briefs before the Court. We designate them accordingly here.

corrosion in a safety structure at Oyster Creek. The Atomic Safety and Licensing Board (the “Board”) admitted one of these contentions, denied several others, and ultimately determined that the admitted contention lacked merit. The NRC affirmed the Board’s decisions and granted the license renewal application. Citizens assert that the Board and the NRC committed various procedural errors in denying their contentions and failed to make the safety findings required to issue a renewed license. For the reasons stated below, we will deny the petition for review.²

I.

A. Factual Background

Oyster Creek is a nuclear generating plant located in Ocean County, New Jersey. Originally licensed on April 9, 1969 for a forty-year term, Oyster Creek is the oldest operating commercial nuclear power plant in the United States. The operator and licensee of the plant, Exelon Generation Co., LLC (“Exelon”), formerly AmerGen Energy

² We sought comment from the NRC, Exelon, and Citizens regarding the potential impact of the damage to the Fukushima Daiichi Nuclear Power Station on the propriety of granting a license renewal of Oyster Creek. After considering the submissions from the parties (including the NRC’s indication that Oyster Creek’s containment is adequate), it appears that the events in Japan do not provide a basis to grant the petition for review in this case.

Company, LLC (“AmerGen”),³ applied to extend its license by another twenty years on July 22, 2005. During the relicensing proceedings, Citizens raised issues regarding corrosion in the steel containment shell, known as the drywell shell or liner. The drywell shell is a steel safety structure that encloses the reactor vessel. Standing about 100 feet tall, the drywell shell is shaped like an inverted light bulb, and is designed to withstand the potential pressure and temperature associated with the break of any of the reactor’s cooling system pipes. The sand bed region supports the drywell shell and is divided into circumferential bays that divert water reaching the sand bed floor. If water does not drain properly, corrosion may occur in the liner and lead to safety issues.

In the late 1980s, corrosion was discovered after water had leaked into the outer wall of the drywell shell in the top of the sand bed region. Various mitigating actions were taken, including removal of the sand from the sand bed region, cleaning the exterior of the drywell shell, applying an epoxy coating to the exterior of the drywell shell, clearing the sand bed drains, and taking ultrasonic testing (“UT”) measurements. These UT measurements were used to determine the damage caused by the corrosion. After instituting these measures, AmerGen concluded that the corrosion had stopped.

When Exelon applied for a license renewal, it made numerous commitments to the NRC Staff (the “Staff”) that its aging management program for the drywell shell would

³ We refer to Exelon and AmerGen interchangeably throughout this opinion.

adequately manage corrosion throughout the renewal period. For instance, Exelon committed to perform a full sand bed region inspection prior to relicensing and every four years thereafter. As part of this inspection, Exelon would take UT measurements at various locations and perform visual inspections of the epoxy coating. This original application, however, did not provide for future UT measurements in the sand bed region of the drywell liner specifically. Exelon did not include such measurements because it determined that the corrosion had ceased and periodic visual inspections would be sufficient to detect any age-related corrosion. In addition, Exelon committed to monitor the trenches inside the drywell shell to ensure that no water was found, and to perform a 3-D structural analysis of the drywell shell.

B. Statutory & Regulatory Framework

Pursuant to the Atomic Energy Act (“AEA”), a commercial nuclear power plant may be licensed for a term of up to forty years. 42 U.S.C. § 2133(c). A plant may apply to renew its license for a fixed term of up to forty more years. 10 C.F.R. § 54.31(b). Section 189(a) of the AEA directs the NRC to “grant a hearing upon the request of any person whose interest may be affected by the proceeding, and [] admit any such person as a party to such proceeding.” *Id.* § 2239(a)(1)(A). Aside from this direction, the AEA does not provide standards that the NRC must apply when issuing a renewed license. Instead, the AEA grants the NRC discretion to achieve its statutory purpose. *See Nuclear Info. Res. Serv. v. Nuclear Regulatory Comm’n*, 969 F.2d 1169, 1177 (D.C. Cir. 1992) (“The AEA has been consistently read . . . to give the Commission broad regulatory latitude.”). In this regard,

“the NRC regulatory scheme is ‘virtually unique in the degree to which broad responsibility is reposed in the administrative agency, free of close prescription in its charter as to how it shall proceed in achieving the statutory objectives.’” *In re Three Mile Island Alert, Inc.*, 771 F.2d 720, 727-78 (3d Cir. 1985) (quoting *Westinghouse Elec. Corp. v. Nuclear Regulatory Comm’n*, 598 F.2d 759, 771 (3d Cir. 1979)).

The NRC has codified comprehensive regulations governing nuclear power plant license renewal proceedings. *See* 10 C.F.R. Part 54. The scope of the NRC license renewal process is limited. While the ongoing regulatory process ensures that the current licensing basis (“CLB”) maintains an acceptable level of safety, the license renewal proceeding focuses exclusively on the detrimental effects of aging – the most significant safety issue posed by long-term reactor operation. The NRC may grant a license if there is “reasonable assurance” that the licensee’s plan to address aging issues will maintain the CLB. 10 C.F.R. § 54.29(a). A petitioner intervening in a license renewal proceeding must establish standing and proffer a valid contention, a specific issue of law or fact challenging the licensee’s plan to handle aging issues. The regulations set forth the contention admissibility and timeliness requirements, as well as the standards for filing late contentions and reopening the administrative record. The NRC published a notice of opportunity for hearing on September 15, 2005. *See* 70 Fed. Reg. 54,585 (Sept. 15, 2005). Citizens had sixty days, until November 14, 2005, to raise admissible contentions. *See* 10 C.F.R. § 2.309(b)(3)(i).

C. Procedural History

1. Citizens' Proposed Contentions

On November 14, 2005, Citizens filed their first petition to intervene, containing a single contention: Exelon's application was deficient due to its failure to provide for periodic UT measurements in *all* levels of the drywell liner. The Board admitted a narrower version of this contention and allowed Citizens to challenge Exelon's plan for taking UT measurements in the sand bed region only, not the entire drywell liner (the "Initial Contention"). The Board issues the initial decision regarding the admissibility of contentions and the propriety of granting a license renewal. Thereafter, petitioners may seek further review from the NRC. In February 2006, Citizens filed a motion to add two new contentions. The first contention challenged Exelon's UT monitoring for the embedded region of the drywell, the region of the shell below the sand bed region (the "Embedded Region Contention"). The second contention alleged that Exelon's UT monitoring program was insufficient to detect corrosion on the interior of the drywell, as opposed to the known historical corrosion on the exterior (the "Interior Corrosion Contention").

After filing its initial renewal application, Exelon subsequently committed to carry out additional UT measurements. On December 9, 2005, Exelon docketed a commitment to perform a set of one-time UT measurements in the sand bed region of the drywell prior to the period of extended operation. On April 4, 2006, Exelon docketed a further commitment to complete periodic UT measurements in the sand bed region throughout the period of extended operation. And, on June 20, 2006, Exelon committed to

perform additional UT measurements during the next two refueling cycles. As a result of these commitments to conduct UT measurements throughout the period of extended operation, Exelon filed a motion to dismiss Citizens' Initial Contention as moot. The Board granted Exelon's motion, but allowed Citizens to file a new contention raising a substantive challenge to Exelon's UT measurement program for the sand bed region. *See In the Matter of AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), No. 50-0219-LR, 63 N.R.C. 737 (2006).

Citizens filed their new contention on June 23, 2006, and the Board divided the contention into seven discrete challenges.⁴ The Board admitted the contention in part and

⁴ Citizens raised the following challenges in its contention:

1. AmerGen's acceptance criteria are inadequate to ensure adequate safety margins.
2. AmerGen's scheduled UT monitoring frequency in the sand bed region is insufficient to maintain an adequate safety margin.
3. AmerGen's monitoring in the sand bed region for moisture and coating integrity is inadequate.
4. AmerGen's response to wet conditions and coating failure in the sand bed region is inadequate.
5. AmerGen's scope of UT monitoring is insufficient to systematically identify and sufficiently test all the degraded areas in the sand bed region.

denied it in part. Specifically, the Board allowed Citizens' contention that the scheduled UT monitoring frequency in the sand bed region was insufficient to maintain an adequate safety margin (the "Frequency Contention"). See *In the Matter of AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), No. 50-0219-LR, 64 N.R.C. 229 (2006). In their petition for review to this court, Citizens challenge the denial of only two parts of the contention: (1) that Exelon's acceptance criteria are inadequate to ensure adequate safety margins (the "Acceptance Criteria Contention") and (2) that Exelon's scope of UT monitoring is insufficient to identify and test all the degraded areas in the sand bed region (the "Spatial Scope Contention").⁵ "Acceptance criteria" is the minimum required thickness for the drywell shell and is used to calculate the point where corrosion is a threat to the shell's structure. In the Acceptance Criteria Contention, Citizens argued that Exelon failed to ensure that the safety margins will be maintained throughout the period of extended operation. In the Spatial Scope Contention, Citizens asserted that the scope of UT monitoring was too narrow to allow meaningful comparison

6. AmerGen's quality assurance for the measurements in the sand bed region is inadequate.

7. AmerGen's methods for analyzing UT results in the sand bed region are flawed.

⁵ The Board denied the four other aspects of Citizens' contention. Citizens do not base their petition for review on this denial and we do not address the propriety of the Board's decision in this regard.

with the acceptance criteria. More specifically, Citizens insisted that the monitoring program failed to include proposed measurements of areas of the sand bed region known to be thinner than other areas.

2. Decisions of the Board

On February 9, 2007, the Board denied Citizens' motion to add the Embedded Region Contention and the Interior Corrosion Contention. The Board determined that both contentions were untimely because they were filed after the contention admissibility deadline and they were not based on previously unavailable information. Alternatively, the Board held that even if the contentions were timely, Citizens did not demonstrate that a genuine dispute existed on a material issue of law or fact. The Board also determined that both the Acceptance Criteria and the Spatial Scope Contentions were not based on previously unavailable information, and thus were untimely.

After the administrative record was closed, the Board convened an evidentiary hearing, focusing primarily on the Frequency Contention. Exelon, Citizens, and the NRC presented numerous witnesses. The central issue during the proceedings was whether Exelon's scheduled UT monitoring frequency in the sand bed region during the period of extended operation was sufficient to maintain an adequate safety margin. On December 18, 2007, the Board rejected the Frequency Contention and found that Exelon demonstrated that the frequency of its planned UT measurements would maintain the necessary safety margin (the "Initial Decision"). *See In the Matter of AmerGen Energy Co., LLC* (Oyster

Creek Nuclear Generating Station), No. 50-0219-LR, 66 N.R.C. 327 (2007). Judge Baratta concurred and would have imposed additional requirements on the proposed 3-D analysis. After the NRC directed the Board to address this issue, it determined that Exelon's 3-D analysis would be sufficient. Citizens filed a petition for review of the Initial Decision to the NRC.

While the petition for review of the Initial Decision was pending, Citizens filed a motion to reopen the administrative record and to add a new contention after the Staff informed the NRC that it was reviewing an analytical approach called the "Green's function" method. Licensees of nuclear power plants often used this method to calculate certain cumulative usage factors, which quantify the fatigue that a particular metal component experiences during plant operation. The Staff reported that although the "safety significance of using the [Green's function] is low," it wanted to alert the NRC. 68 N.R.C. at 10. Soon after, the Staff issued a report addressing the potential problems with the analysis, but ultimately concluded that the "Green's function methodology is not in question" and applicants who rely on it should "perform confirmatory analyses to demonstrate that the simplified Green's function analyses provide acceptable results." *Id.* Exelon subsequently performed a confirmatory analysis.

Based on the Staff's report and a newspaper article in which an NRC spokesperson commented on the significance of a break in a recirculation nozzle, Citizens sought to add another contention to the motion – that Exelon's predictions for metal fatigue for the circulation nozzles at Oyster Creek

were deficient, and a confirmatory analysis was necessary (the “Metal Fatigue Contention”). On July 24, 2008, the Board denied the motion and ruled that Citizens did not raise a significant safety issue regarding use of the Green’s function analysis and, in any event, the contention was moot because Exelon performed a confirmatory analysis. *See In the Matter of AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), No. 50-0219-LR, 68 N.R.C. 5 (2008).

3. Decisions of the NRC

While review of the Initial Decision was pending, Citizens filed a petition for review directly with the NRC requesting that the proceedings be suspended entirely and that the NRC conduct a comprehensive overhaul of the Staff’s review of license renewal applications (the “Supervision Decision”). In support of their claim, Citizens relied on an audit report issued by the NRC’s Office of the Inspector General (the “OIG Report”). The OIG Report described the Staff’s implementation of the comprehensive licensing scheme, but also identified areas that could be improved such as the transparency of the Staff’s reporting and standardization of the depth of its reviews. The Staff agreed to implement the relevant recommendations.⁶ The NRC denied Citizens’ petition for review on the ground that the petition impermissibly challenged the adequacy of the Staff’s review process and, even if the challenge were proper, the

⁶ The Staff declined to implement one of these recommendations. As Citizens did not base its petition to the NRC on that ground, it is not at issue here.

OIG Report did not establish any basis for relief. *See In the Matter of AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), No. 50-219-LR, 68 N.R.C. 461 (2008).

Citizens also sought review of the Board's decision denying Citizens' motion to reopen the administrative record and motion to add the Metal Fatigue Contention. The NRC affirmed the Board's decision, determining that Citizens failed to demonstrate the existence of a significant safety issue and that a materially different result would have occurred. *See In the Matter of AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), No. 50-219-LR, 68 N.R.C. 658 (2008). Before the NRC issued a final decision, Exelon notified the NRC that a visual inspection of the drywell shell identified a rust stain and a small area where the epoxy coating was blistered. The Staff determined that this corrosion was of very low safety significance. Exelon subsequently updated the NRC on the status of the corrosion, reporting that small deposits of soluble salts, which often draw moisture through the epoxy coating, were the most likely cause. In addition, Exelon reported that the cracks in the moisture seal were the result of uncured epoxy caulk. In response, the Staff performed an inspection, reviewed the technical information, and concluded that no significant safety conditions relating to the drywell shell would prohibit plant operation. According to the Staff, the problems Exelon identified had a minimal impact on the drywell shell and the corrosion rate was very small. The Staff issued an inspection report to the NRC elaborating on these conclusions. As a result, Citizens filed another motion to reopen the administrative record. The NRC denied the motion.

Lastly, Citizens sought review of the Board's denial of the Embedded Region, the Interior Corrosion, the Acceptance Criteria, and the Spatial Scope Contentions, as well as the substantive ruling in the Initial Decision. Concluding that the Board's decisions were well-founded, the NRC affirmed the Initial Decision, refused to reopen the record to allow the inspection report, and denied Citizens' petition for review (the "Final Decision"). *See In the Matter of AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), No. 50-219-LR, 69 N.R.C. 235 (2009). Commissioner Jaczko dissented in part and would have allowed the inspection report into evidence.

II.

Under the Administrative Procedure Act, we "hold unlawful and set aside agency action, findings, and conclusions found to be . . . arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." 5 U.S.C. § 706(2)(A); *see also Limerick Ecology Action, Inc. v. U.S. Nuclear Regulatory Comm'n*, 869 F.2d 719, 728 (3d Cir. 1989).⁷ We are charged with the "limited, albeit important, task of reviewing agency action to determine whether the agency conformed with controlling statutes." *Baltimore Gas & Elec. Co. v. Natural Res. Def. Council*, 462 U.S. 87, 97 (1983). "Administrative decisions should be set aside in this context, as in every other, only for substantial procedural or substantive reasons[.]" *Vermont Yankee Nuclear Power Corp. v. Natural Res. Def. Council*, 435 U.S. 519, 558 (1978)

⁷ The NRC had jurisdiction pursuant to 10 C.F.R. § 2.341 and we have jurisdiction under 28 U.S.C. § 2342(4).

(internal citation omitted). “[W]e defer to the agency’s construction of . . . its own regulation, unless it is plainly erroneous or inconsistent with the regulation.” *Beazer East, Inc. v. U.S. E.P.A., Region III*, 963 F.2d 603, 606 (3d Cir. 1992) (internal quotations omitted). And, “[w]hen examining this kind of scientific determination, as opposed to simple findings of fact, a reviewing court must generally be at its most deferential.” *Baltimore Gas*, 462 U.S. at 103.

III.

A. **The NRC’s Denial of Citizens’ Embedded Region, Interior Corrosion, Acceptance Criteria, and Spatial Scope Contentions**

Citizens argue that the NRC abused its discretion in ruling that the Embedded Region, the Interior Corrosion, the Acceptance Criteria, and the Spatial Scope Contentions were untimely and inadmissible. The standard for contention admissibility provides that “[a] request for hearing or petition for leave to intervene must set forth with particularity the contentions sought to be raised” and establishes several threshold requirements. 10 C.F.R. § 2.309(f)(1). The regulations direct a party to:

- (i) Provide a specific statement of the issue of law or fact to be raised . . .
- (ii) Provide a brief explanation of the basis for the contention;

(iii) Demonstrate that the issue raised is within the scope of the proceeding;

(iv) Demonstrate that the issue raised is material to the findings the NRC must make to support the action that is involved in the proceeding;

(v) Provide a concise statement of the alleged facts or expert opinions which support the requestor's/petitioner's position on the issue and on which the petitioner intends to rely at hearing, together with references to the specific sources and documents on which the requestor/petitioner intends to rely to support its position on the issue;

(vi) Provide sufficient information to show that a genuine dispute exists with the applicant on a material issue of law or fact

10 C.F.R. § 2.309(f)(1)(i)-(vi). The standard for filing new and amended contentions after the filing deadline is set forth at 10 C.F.R. § 2.309(f)(2). Pursuant to these regulations, "contentions may be amended or new contentions filed after the initial filing only with leave of the presiding officer" and the party must make a showing that:

(i) The information upon which the amended or new contention is based was not previously available;

(ii) The information upon which the amended or new contention is based is materially different than information previously available; and

(iii) The amended or new contention has been submitted in a timely fashion based on the availability of the subsequent information.

10 C.F.R. § 2.309(f)(2)(i)-(iii). Because Citizens sought to add these contentions after the initial contention deadline, they needed to satisfy the standards for late-filed contentions, as well as the general contention admissibility requirements.

1. Embedded Region & Interior Corrosion Contentions

With respect to the Embedded Region Contention, the Board determined that Citizens failed to demonstrate that the information upon which the amended or new contention was based was not previously available as required by 10 C.F.R. § 2.309(f)(2)(i) because an NRC Staff report published in 2005 had discussed this issue. Alternatively, the Board held that Exelon's commitment to repeating UT measurements in the embedded region in 2008 and thereafter was not new information to support the contention. Because Citizens alleged that Exelon's enhanced monitoring program for the embedded region was inadequate, the unenhanced monitoring program must also have been inadequate. Even assuming that the contention was timely, the Board also found that the Embedded Region Contention did not meet the admissibility requirements. Citizens asserted that AmerGen improperly chose to take UT measurements in Bay 5 of the drywell shell,

when it should have taken measurements in a bay that experienced more corrosion. The Board rejected this argument. It noted that “a principal purpose of AmerGen’s monitoring program was to obtain *visual* confirmation of whether corrosion was occurring on the interior” and “achievement of this goal does not require conducting UT monitoring in any particular Bay.” (A.R. at 447.) The Board further concluded that Citizens’ argument regarding the rate of corrosion in the embedded region did not raise a material dispute. Rather, the Board rejected the opinion of Citizens’ expert, Dr. Hausler, that groundwater could come into contact with the embedded region. It noted that “[t]his assertion is belied by the uncontradicted record evidence showing that design features serve to prevent groundwater contact with the exterior, embedded shell.” (*Id.* at 450.)

As to the Interior Corrosion Contention, the Board found the contention untimely for the same reasons as was the Embedded Region Contention. In addition, it also concluded that Citizens failed to allege adequate facts or provide supporting arguments demonstrating a material dispute. Citizens argued that the UT measurements should focus on the sand bed region below the interior floor, rather than the exterior because interior corrosion had occurred at other reactors. The Board dismissed this argument and determined that “Citizens’ speculative assertion that interior corrosion *might* exist at Oyster Creek based on corrosion at other plants does not raise a genuine dispute of material fact.” (*Id.* at 453.) (emphasis in original). Finding that Citizens had not presented evidence of corrosion on the interior of the drywell and that “the instant record does not support a conclusion that

Oyster Creek has experienced such corrosion,” the Board determined that the contention did not satisfy the requirements of 10 C.F.R. § 2.309(f)(1)(vi). (*Id.*)

Considering the Embedded Region Contention, the NRC agreed with the Board’s reasoning that an enhancement to a program that already exists cannot be considered previously unavailable information to support a new contention. This is because “if . . . AmerGen’s *enhanced* monitoring program is inadequate, then AmerGen’s *unenanced* monitoring program embodied in its [license renewal application] was *a fortiori* inadequate.” 69 N.R.C. at 274 (emphasis in original). As to the Interior Corrosion Contention, the NRC agreed that simply asserting that interior corrosion was a possibility, without proffering supporting evidence, did not raise a genuine dispute.

The NRC’s decision to agree with the Board’s ruling was not an abuse of discretion. The NRC permissibly concluded that information was available in 2005 upon which Citizens could have lodged the Embedded Region Contention. Citizens failed to demonstrate that “[t]he information upon which the [Embedded Region Contention] is based was not previously available.” 10 C.F.R. § 2.309(f)(2)(i).

Further, the NRC reasonably determined that if AmerGen’s enhanced monitoring program was insufficient, it must have been insufficient beforehand too. The NRC and the Board reached their decisions after analyzing technical data, and ruling that Citizens had not raised a genuine dispute on a material fact to challenge these conclusions. Likewise,

the NRC had a sufficient factual basis for adopting the Board's conclusion that the existence of interior corrosion at other reactor facilities was speculative and did not create a genuine dispute that Oyster Creek experienced such corrosion. The NRC adopted a reasonable construction of the contention admissibility requirements that is entitled to deference because it is not "plainly erroneous or inconsistent with the regulation." *Beazer East*, 963 F.2d at 606.

We are "particularly reluctant to second-guess agency choices involving scientific disputes that are in the agency's province of expertise," *New York v. U.S. Nuclear Regulatory Comm'n*, 589 F.3d 551, 555 (2d Cir. 2009) (internal quotation marks omitted). Moreover, "when we consider a purely factual question within the area of competence of an administrative agency . . . we recognize the [NRC's] technical expertise and experience, and defer to its analysis unless it is without substantial basis in fact." *Id.* (internal quotation marks omitted). Having determined that the NRC based its decisions on a credible rationale and a substantial factual basis, we decline to disturb its ruling.

2. Acceptance Criteria Contention

Next, Citizens assert that the NRC abused its discretion in ruling that the Acceptance Criteria Contention was untimely. Specifically, Citizens claim that Exelon's April 2006 commitment clarified its change to the acceptance criteria and thus there was new information to support this challenge that was unavailable in 2005. The Board disagreed because "nothing in AmerGen's April 4 or June 20 commitments . . . adds to, or modifies, the acceptance criteria

that have been in effect for years.” 64 N.R.C. at 238. Affirming the Board’s ruling, the NRC remarked that “[t]he Board correctly found that the acceptance criteria were not new – even if expanded commitments to apply these criteria were recent.” 69 N.R.C. at 272. Significantly, “[t]he ultrasonic testing commitments AmerGen made in . . . 2006 did not alter the acceptance criteria themselves. The acceptance criteria remained the same as they were in the early 1990s.” *Id.*

Because Citizens sought to introduce this contention after the initial filing deadline based on allegedly new information, they must satisfy the requirements for late-filed contentions. The NRC did not abuse its discretion in ruling that Citizens failed to demonstrate that the information upon which the Acceptance Criteria Contention is based was not previously unavailable or materially different than information that was available. *See* 10 C.F.R. § 2.309(f)(2)(i)-(iii). The record reveals that AmerGen’s predecessor used the acceptance criteria analysis to measure the drywell shell in the 1990s and Citizens’ original petition to intervene referenced this practice. If Citizens wished to challenge the adequacy of the acceptance criteria – when it had been historically used to evaluate the effects of corrosion as evaluated by UT measurements – the information was available to raise the issue in their initial petition. As a result, the NRC did not abuse its discretion in concluding that the Acceptance Criteria Contention was not based on previously unavailable information and it was inadmissible pursuant to 10 C.F.R. § 2.309(f)(2)(i). “Section 189(a) does not confer the automatic right of intervention upon anyone.” *Union of*

Concerned Scientists v. U.S. Nuclear Regulatory Comm'n, 920 F.2d 50, 55 (D.C. Cir. 1990) (internal quotations omitted). Rather, “a hearing must be held on material issues that are specifically and timely raised.” *Limerick Ecology*, 869 F.2d at 724-25. Citizens fail to demonstrate that the NRC’s conclusion was an abuse of discretion.

3. Spatial Scope Contention

Citizens also argue that the NRC improperly affirmed the Board’s ruling that the correct time to raise its Spatial Scope Contention was after Exelon docketed its December 2005 commitment. In this contention, Citizens sought to challenge the various locations at which the UT measurements would be taken. The Board determined that Exelon’s 2006 commitment did not provide any new information that would serve as a basis for this contention. Rather, Exelon’s December 2005 commitment stated that “one-time measurements will be taken from inside the drywell *at locations tested in the 1990s.*” 64 N.R.C. at 250 (emphasis added). Thus, Citizens had prior knowledge of the location of the one-time UT measurements, even before Exelon committed in 2006 to perform the measurements throughout the period of extended operation. The NRC agreed. It noted that “[t]he locations on the drywell shell where the ultrasonic testing measurements are made are fixed.” 69 N.R.C. at 273.

The NRC properly affirmed the Board’s rejection of the Spatial Scope Contention because this information was previously available, rendering the contention deficient under 10 C.F.R. § 2.309(f)(2). Citizens had notice of the spatial

scope of the measurements when Exelon docketed its commitment to take UT measurements in December 2005. The NRC properly affirmed the Board's rejection of the Spatial Scope Contention because this information was previously available and 10 C.F.R. § 2.309(f)(2) was not met. The NRC's conclusion derives from adequate record support and is not an abuse of discretion. *See Limerick Ecology*, 869 F.2d at 744.

B. The NRC's Denial of Citizens' Motion to Reopen the Administrative Record to Admit the Metal Fatigue Contention

Citizens insist that the NRC denied them their right to a hearing under the AEA in applying the standards for reopening the administrative record to their proffered Metal Fatigue Contention when the contention had not been previously litigated. Alternatively, Citizens maintain that their motion satisfied the reopening requirements.

The regulations dictate that:

A motion to reopen a closed record to consider additional evidence will not be granted unless the following criteria are satisfied:

(1) The motion must be timely. However, an exceptionally grave issue may be considered in the discretion of the presiding officer even if untimely presented;

(2) The motion must address a significant safety or environmental issue; and

(3) The motion must demonstrate that a materially different result would be or would have been likely had the newly proffered evidence been considered initially.

10 C.F.R. § 2.326(a)(1)-(3). Reopening the administrative record in an NRC proceeding is an “extraordinary action.” 51 Fed. Reg. 19,535, 19,538 (May 30, 1986). The proponent must meet a very heavy burden and “present[] material, probative evidence which either could not have been discovered before or could have been discovered but is so grave that, in the judgment of the presiding officer, it must be considered anyway.” *Id.*

Citizens argue that the NRC may not apply the standards for reopening the administrative record to a contention that raises a new issue, as opposed to new evidence about an issue that already has been heard. To support this proposition, Citizens rely on *Union of Concerned Scientists v. U.S. Nuclear Regulatory Comm’n*, 735 F.2d 1437 (D.C. Cir. 1984) (“*UCS I*”). In that case, the NRC categorically barred contentions seeking to challenge the results of emergency preparedness testing and forced the intervenors to add the contention through a motion to reopen. *See id.* at 1443. The D.C. Circuit ruled that the NRC violated the AEA by applying the motion to reopen standard when it should have applied the default contention admissibility requirements. *See id.* Citizens’ reliance on *UCS I* is misplaced. The NRC did not categorically bar the Metal

Fatigue Contention. Rather, it applied the motion to reopen standard because the administrative record was closed by the time the contention was raised.

Citizens also rely on *Deukmejian v. Nuclear Regulatory Comm'n*, 751 F.2d 1287 (D.C. Cir. 1984) (vacated on other grounds). In *Deukmejian*, two licensing proceedings were at issue, and the petitioners challenged deficiencies in the low-power plant proceeding while simultaneously seeking to reopen the administrative record in the full-power plant proceeding on the same ground. *See id.* at 1311. The NRC applied the motion to reopen standard to both challenges. *See id.* at 1312. The D.C. Circuit ruled that automatically funneling the contention challenging the low-power plant proceeding into the motion to reopen process was impermissible because each contention should have been evaluated on its own. The NRC's refusal to distinguish between the contentions violated the AEA because the "criteria for reopening a closed record are higher than the criteria for obtaining a hearing" and "the mere fact that a party can *seek* reopening is not a sufficient substitute for the hearing." *Id.* (emphasis in original).

Citizens' emphasis on *Deukmejian* is also misplaced. In that case, the NRC violated the AEA because it incorrectly characterized a contention challenging the low-power plant proceeding as a motion to reopen the full-power plant proceeding. In the case at hand, there was one proceeding and the NRC permitted Citizens to raise contentions. After the record was closed, only *then* did it apply the motion to reopen standard to the Metal Fatigue Contention. Significantly, after *Deukmejian*, the NRC promulgated its

standards for reopening the record. Pursuant to 10 C.F.R. § 2.326(d), “[a] motion to reopen which *relates to a contention not previously in controversy* among the parties must also satisfy the requirements for nontimely contentions in § 2.309(c).” (emphasis added). Thus, the regulations explicitly allow for contentions alleging previously non-litigated issues to be raised through a motion to reopen. To accept Citizens’ argument that the motion to reopen standard may never be applied in situations where a petitioner seeks to add previously unlitigated material would effectively render the regulation meaningless. We have upheld the motion to reopen standard and deferred to the NRC’s application of its rules, so long as it is reasonable. *See In re Three Mile Island Alert*, 771 F.2d at 732. There is no basis to question the NRC’s application of its regulations here.

Having determined that the NRC properly applied the motion to reopen standard, we evaluate whether the NRC abused its discretion in concluding that Citizens failed to meet the standard. Citizens first argue that the Board impermissibly adjudicated the merits of its challenge to the Green’s function analysis. Second, Citizens claim that the NRC should not have relied on an affidavit from the Staff concluding that the use of the Green’s function method did not present a safety issue. Third, Citizens assert that the NRC should not have disregarded the statement from the NRC spokesperson.

The Board ruled that the motion did not raise a significant safety issue. The Board pointed out that Citizens’ expert, Dr. Hopenfeld, opined that “I expect that the simplified method has under-estimated the [cumulative usage

function] of the recirculation nozzle at Oyster Creek.” 68 N.R.C. at 17 (internal quotation marks omitted). The conjecture, the Board found, was pure speculation and devoid of evidentiary support raising a significant safety issue. Recognizing that the Staff concluded that the Green’s function analysis could result in a non-conservative calculation if incorrectly applied, the Board determined that “the Staff has taken what appear to be prudent steps to confirm that AmerGen has conducted an adequate time limited aging analysis” and this potential defect in the analysis “does not itself establish the existence of a deficiency in the license renewal application that warrants reopening the record.” *Id.* at 18. Further, the Board rejected Citizens’ argument that because cumulative usage function measurements at the Vermont Yankee Facility were flawed, the measurements at Oyster Creek were likely to be deficient as well. The Board maintained that “Citizens provide no factual evidence or expert testimony showing that the analysis used at Oyster Creek employing the Green’s function was improperly performed.” *Id.* Further, the Board noted that Citizens’ reliance on the NRC spokesperson’s statement was misplaced because the comments simply acknowledged that “breakage of certain components in a nuclear facility could have severe consequences.” *Id.* at 19. It did not demonstrate that the Green’s function analysis itself was linked to a significant safety issue. Moreover, the Board concluded that Citizens could not demonstrate that reopening the record as to the Metal Fatigue Contention would lead to “a materially different result,” given that Exelon confirmed that the calculations were correct.

In reviewing the Board's decision, the NRC agreed that Citizens had provided only speculation that the use of the Green's function analysis was non-conservative. The NRC did not abuse its discretion in refusing to reopen the administrative record. First, Citizens' argument that the Board and the NRC impermissibly weighed the evidence lacks merit. The reopening rule requires Citizens to proffer evidence demonstrating "safety significance" and that prior admission of the evidence would have led to a "materially different result." 10 C.F.R. § 2.326(a)(1)-(3). The decisions of the Board and the NRC reveal that both bodies applied this regulation to Citizens' proffered contention and determined that it did not warrant reopening. The NRC's construction of the regulations in this regard is entitled to deference. *See Beazer East*, 963 F.2d at 606.

Second, the NRC reasonably concluded that the Metal Fatigue Contention did not present a significant safety issue that would have led to a materially different result. Citizens did not demonstrate that the original metal fatigue calculations based on the Green's function analysis were deficient. The NRC provided a sound basis for its decision when it concluded that "Citizens provided no evidence to support [their] argument that AmerGen's calculations were based on non-conservative assumptions or methodologies, or to support its premise that a change to a more conservative analytical methodology would push the cumulative usage factor over 1.0." 68 N.R.C. at 671. Thus, Citizens did not meet their burden under 10 C.F.R. § 2.326(a) to demonstrate a significant safety issue and that a materially different result would have been likely. There is substantial record support

for this reasoning and we will not disturb it. *See Limerick Ecology*, 869 F.2d at 744.

Next, we determine that the NRC did not err in relying on the Staff's affidavit asserting that no significant safety issue was presented. We have held that "[i]f the Commission has . . . information bearing on the subject matter of a motion to reopen . . . it should be free to use that information." *Three Mile Island Alert*, 771 F.2d at 732. In addition, the NRC correctly discounted the statements of the NRC spokesperson because these comments did not address the Green's function analysis, but rather generally discussed the consequences of a break in the recirculation nozzle.

Overall, Citizens failed to meet the exacting standard to justify reopening the administrative record. *See Deukmejian*, 751 F.2d at 1317-18 ("Where as here the agency has taken final action on a matter that is peculiarly within its realm of expertise, we will not require the agency to reopen its proceedings except upon a clear showing of abuse of discretion or of extraordinary circumstances." (internal quotations and brackets omitted)). Our review of the record reveals that the NRC "analyzed the relevant issues relying on information from reliable sources, reasoned to a logical conclusion, and articulated the reasons for its decision. As a reviewing court, we can ask nothing more of the [NRC]." *Three Mile Island Alert*, 771 F.2d at 735.

C. The NRC's Safety Findings and the NRC's Denial of Citizens' Motion to Reopen the Administrative Record to Admit the Inspection Report

Citizens next raise a host of arguments challenging the NRC's decision to reject the Frequency Contention and to find that Exelon had demonstrated "reasonable assurance" that it would safely operate Oyster Creek. First, Citizens claim that the NRC did not make a definitive finding, as is required, *see Power Reactor Dev. Co. v. Int'l Union of Elec., Radio, and Mach. Workers*, 367 U.S. 396, 409-10 (1961), that issuing a license renewal will not be dangerous to the health and safety of the public. Citizens base this assertion on the NRC's statement in the Final Decision that, "[s]ubject to the considerations we discuss below . . . [,] we agree with the Board's finding that the ultrasonic testing program provides reasonable assurance that the drywell liner will not violate the acceptance criteria." 69 N.R.C. at 263. Citizens' interpretation of the NRC's decision is incorrect. The Final Decision affirmed the Board's Initial Decision, rejected the Frequency Contention, and the NRC took review of the petition for two limited purposes: (1) it clarified that Exelon's commitment to perform a 3-D analysis was consistent with Judge Baratta's concerns, and (2) it directed the Staff to ensure that Judge Baratta's objective was achieved. The language Citizens rely on was not a qualification on the NRC's safety findings, but rather a qualification on the denial of the petition for review. The NRC made clear that it rendered the requisite safety findings when it noted: "Let us be clear: the Board's fundamental conclusion in [the Initial Decision], authorizing issuance of the renewed license, stands on its own." *Id.* at 282 n.271. The NRC upheld the Board's exhaustive factual findings and we determine that there is no error in this ruling.

Second, Citizens raise several issues concerning the denial of their motion to reopen the administrative record to add the inspection report. As a primary matter, Citizens claim that the NRC improperly required them to demonstrate a significant safety issue. Next, Citizens maintain that the NRC impermissibly referred unresolved safety issues to the Staff to develop more information post-hearing. Finally, Citizens assert that the inspection report revealed unresolved safety issues.

The NRC denied the motion to reopen, pointing out that the Staff had determined that “no findings of significance were identified.” *Id.* at 288. More specifically, the NRC rejected Citizens’ claim that because water was found in the sand bed region during the course of the relicensing proceedings, Exelon’s commitment to detect corrosion was deficient. The NRC pointed out that there were several methods to uncover potential corrosion, despite any problems identified in the inspection report, and Citizens provided no expert support to contradict that finding. Instead, Citizens offered an affidavit from Dr. Hausler in which he speculated regarding causes for the observed corrosion. The NRC concluded that affidavit did not meet the requirements of 10 C.F.R. § 2.326(b) because it did not contain specific factual and/or technical bases to support Citizens’ arguments.

The NRC’s conclusions did not constitute an abuse of discretion. As to Citizens’ first argument, the regulations place the burden on Citizens, the petitioner, to demonstrate the existence of a significant safety issue in seeking to reopen the administrative record. *See* 10 C.F.R. § 2.326(a)(1)-(3). Citizens’ argument regarding delegation to the Staff also

lacks merit. *See Mass. v. U.S. Nuclear Regulatory Comm'n*, 924 F.2d 311, 331 (1st Cir. 1991) (noting that the NRC may refer minor safety matters not pertinent to its basic findings for post-hearing resolution). Given that the Staff concluded that the inspection report raised no significant safety issues, this was an appropriate course of action.

Finally, Citizens' claim that there were unresolved safety issues essentially boils down to their disagreement as to the significance of the issues raised in the inspection report. The NRC relied on the Staff's recommendation that the inspection report did not present a significant safety issue, as well as factual findings that there were other methods to effectively detect future corrosion. Further, the NRC was justified in finding that Dr. Hausler's affidavit was deficient given that it only offered speculation as to the cause of the corrosion and failed to offer supporting evidence, falling short of the requirements in 10 C.F.R. § 2.326(b). The NRC had a substantial basis to conclude that the inspection report did not demonstrate a "significant safety or environmental issue" and "that a materially different result . . . would have been likely" had the report been admitted. 10 C.F.R. § 2.326(a)(1)-(3). Although the NRC's decision was not unanimous, the majority based their decision on facts in the record and reasonably applied their technical expertise. Our role is not to "weigh the evidence, but [rather] to determine whether substantial evidence supports the Commission's decision." *Limerick Ecology*, 869 F.2d at 753. We determine that the NRC properly exercised its discretion in ruling that Exelon demonstrated "reasonable assurance" that it could operate

Oyster Creek, and that the inspection report did not raise a significant safety issue justifying reopening of the record.

D. The NRC's Rejection of Citizens' Supervision Petition

As a final matter, Citizens challenge the NRC's denial of the Supervision Petition and claim that the OIG Report demonstrates that the Staff's safety review was inadequate. In essence, Citizens claim that the NRC should have suspended the relicensing proceedings and conducted a comprehensive overhaul of the Staff's review process. In addition, Citizens sought to reopen the record to include the OIG Report.

The NRC denied both of Citizens' requests. First, it noted that Citizens may not challenge the adequacy of the Staff's review. Rather, they may only proffer admissible contentions alleging that a "genuine dispute exists *with the applicant/licensee* on a material issue of law or fact." 10 C.F.R. § 2.309(f)(1)(vi) (emphasis added). Thus, the NRC concluded that Citizens' argument challenging the NRC's supervision of its Staff was beyond the scope of the relicensing proceedings. In any event, the NRC addressed Citizens' arguments and ultimately determined that the OIG Report did not establish a need for a complete overhaul of the license renewal process. The NRC noted that, although the OIG Report identified certain weaknesses, the Staff agreed to implement the OIG Report's suggestions. More importantly, however, the OIG Report did not characterize any of the findings as posing a safety risk. Finally, the NRC denied Citizens' motion to reopen the administrative record to

include the OIG report. In doing so, it concluded that Citizens failed to provide supporting affidavits and offered “only the speculation that the Staff may have failed to identify such a [significant safety issue] because their review may have been insufficiently thorough.” 68 N.R.C. at 468.

The NRC’s refusal to grant the Supervision Petition was well-founded. At the outset, the NRC’s conclusion that “the focus of the license proceeding must be the sufficiency of the application, not the adequacy of the Staff’s review,” is proper in light of the regulations, *see* 10 C.F.R. § 2.309(f)(1)(vi), and we will not second-guess the NRC’s reasonable construction thereof. *See Beazer East*, 963 F.2d at 606. Even more dubious is our authority to review the NRC’s supervision of its own Staff, in light of the AEA’s grant of authority to the NRC to achieve its statutory purpose. *See* 5 U.S.C. § 701(a)(2) (judicial review is not appropriate where “agency action is committed to agency discretion by law”). Thus, we decline to review the NRC’s decision not to overhaul the licensing proceedings.

As to the motion to reopen the record, the NRC’s conclusion was amply supported. The regulations require a petitioner to supply affidavits in support of such a motion, *see* 10 C.F.R. § 2.326(b), and Citizens failed to do so. Moreover, the NRC reasonably concluded that the OIG Report did not present a significant safety issue. In doing so, the NRC explained that “the OIG Report did not conclude that the Staff generally neglected to conduct necessary reviews, audits, and inspections.” 68 N.R.C. at 474. Although the OIG Report noted some deficiencies in the Staff’s report writing, the NRC expressed confidence in the substance of the Staff’s decisions

by noting “we remain convinced that the agency’s current licensing renewal approach and process are sensible and lawful.” *Id.* at 481. The NRC’s conclusion that the motion to reopen was deficient under 10 C.F.R. § 2.326(a)(2) derives from adequate record support and we will uphold it.

IV.

After a thorough review of the comprehensive decisions of the Board and the NRC, we conclude that the NRC did not abuse its discretion in rejecting Citizens’ various challenges to Exelon’s license renewal application for Oyster Creek. We commend Citizens for their diligence in bringing these issues to the attention of the Board and the NRC. We also recognize that the Board and the NRC provided hundreds of pages detailing their decision making and gave due consideration to Citizens’ concerns. We are confident that the NRC’s review of Exelon’s application was well-reasoned, and we will not second-guess technical decisions within the realm of its unique expertise. For the foregoing reasons, we will deny the petition for review.